

10. (Amended) The method of claim 7, wherein said acetoacetyl-CoA reductase is selected from the group consisting of:

- Sub Ca  
AI
- (a) a protein comprising the amino acid sequence of SEQ ID NO: 9;
  - (b) a protein (1) comprising a modified amino acid sequence of SEQ ID NO: 9 in which one or more amino acid residues are added, deleted, or substituted and (2) capable of asymmetrically reducing 4-haloacetoacetic acid ester or its derivatives to produce (S)-4-halo-3-hydroxybutyric acid ester; and
  - (c) a protein (1) encoded by DNA [hybridizable with the] that hybridizes under stringent conditions to DNA [comprising the nucleotide sequence] consisting of SEQ ID NO: 10 and (2) capable of asymmetrically reducing 4-haloacetoacetic acid ester or its derivatives to produce (S)-4-halo-3-hydroxybutyric acid ester.

Add new claims 23-27 as follows.

--23. The method of claim 7, wherein said acetoacetyl-CoA reductase is derived from *Zoogloea ramigera*.--

--24. The method of claim 7, wherein said acetoacetyl-CoA reductase comprises the amino acid sequence of a naturally occurring acetoacetyl-CoA reductase.--

A

--25. A method for producing a (S)-4-halo-3-hydroxybutyric acid ester, the method comprising

contacting a 4-halo-acetoacetic acid ester or its derivative with (A) a microorganism that (1) is transformed with an isolated nucleic acid encoding an acetoacetyl-CoA reductase that can participate in a poly- $\beta$ -hydroxy fatty acid biosynthesis system, and (2) comprises an enzyme capable of catalyzing production of NAD(P)H from NAD(P)<sup>+</sup>, or (B) a cell-free fraction of the microorganism; and

expressing the acetoacetyl-CoA reductase in the microorganism in an amount sufficient to asymmetrically reduce the 4-halo-acetoacetic acid ester or its derivative to produce the (S)-4-halo-3-hydroxybutyric acid ester.--